

**WHAT IS CLAIMED IS:**

- 1 1. A method for artifact detection and counting in a video signal processing circuit  
2 having a count table, the method comprising using first and second loops for each of  
3 horizontal and vertical count table entries, the first loop being adapted to increase the count  
4 table entries up to the length of a remainder value of a detected artifact value and the second  
5 loop being adapted to increase the count table entries using a quotient value of a detected  
6 artifact value.
- 1 2. The method of claim 1, wherein using first and second loops in a horizontal direction  
2 comprises:  
3 defining a length of artifacts in the horizontal direction in a video image using the  
4 equation  $\text{contour\_H} = (\text{contourH\_Q} \times \text{PREVIOUS\_GRID\_SELECT} + \text{contour\_H\_R})$ ,  
5 wherein  $\text{contour\_H}$  is the length value of the artifacts,  $\text{contourH\_Q}$  being a quotient value and  
6  $\text{contour\_H\_R}$  being a remainder value;  
7 performing the first looping pass of a video data pixel block and increasing an entry in  
8 the count table in response to quotient and remainder values of  $\text{contour\_H}$ , the count table  
9 entry being increased to a value not exceeding the remainder value; and  
10 performing the second looping pass of the video data pixel block and increasing the  
11 remainder values of artifact entries with a value equal to the quotient value - 1 and not  
12 exceeding the end of a horizontal row.
- 1 3. The method of claim 2, wherein using first and second loops for horizontal count table  
2 entries includes using an incremental value  $\text{inc}$  defined by the equation  $\text{inc} =$   
3  $\text{contour\_H} / \text{PREVIOUS\_GRID\_SELECT}$ .
- 1 4. The method of claim 1, wherein using first and second loops in a vertical direction  
2 comprises:

defining a length of artifacts in the vertical direction in a video image using the equation  $\text{contour\_V} = \text{contour\_V\_Q} * 8 + \text{contour\_V\_R}$ , wherein  $\text{contour\_V}$  is the length value of the artifacts,  $\text{contour\_V\_Q}$  being a quotient value and  $\text{contour\_V\_R}$  being a remainder value;

performing the first looping pass of a video data pixel block and increasing an entry in the count table in response to quotient and remainder values of  $\text{contour\_H}$ , the count table entry being increased to a value not exceeding the remainder value; and

performing the second looping pass of the video data pixel block and increasing the remainder values of artifact entries with a value equal to the quotient value - 1 and not exceeding the end of a vertical column.

5. The method of claim 4, wherein using first and second loops for vertical count table entries includes using an incremental value  $\text{inc}$  defined by the equation  $\text{inc} = \text{contour\_V} / 8$ .

6. The method of claim 1, wherein the vertical size of the count table entries is eight.

7. The method of claim 1, wherein the horizontal size of the count table entries is eight.

8. The method of claim 1, wherein the horizontal size of the count table entries is ten.

9. The method of claim 1, wherein the horizontal size of the count table entries is twelve.

10. The method of claim 1, further comprising defining a boundary for the size of at least a portion of a loop.

11. The method of claim 10, wherein defining a boundary includes defining an upper boundary.

- 1 12. The method of claim 10, wherein defining a boundary includes defining a lower  
2 boundary.
- 1 13. The method of claim 10, wherein defining a boundary includes effecting a wrap  
2 around within the count table.
- 1 14. The method of claim 1, wherein the count table entries is increased using only one  
2 addition.